

Search Plan and Results

Question

[Is energy density associated with type 2 diabetes in adults? \(DGAC 2010\)](#)

Date Searched

3/16/2009

Inclusion Criteria

- June 2004 to present
- Human subjects
- English language
- International
- Sample size: Minimum of 10 subjects per study arm; preference for larger sizes, if available
- Dropout rate: Less than 20% under one year and less than 40% at one year or longer; preference for smaller dropout rates
- Ages: Children two to 18 years; Adults: 19 and older
- Systematic reviews, meta-analyses, randomized controlled trials (RCTs), longitudinal cohort studies
- Populations: Healthy, those with elevated chronic disease risk and those diagnosed with the highly prevalent chronic diseases (CHD/CVD, Hypertension, Type 2 Diabetes, Osteoporosis, Osteopenia and Obesity).

Exclusion Criteria

- Medical treatment or therapy
- Diseased subjects
- Hospitalized patients
- Malnourished or third-world populations or disease incidence not relative to US population (e.g., malaria)
- Animal studies
- In vitro studies
- Articles not peer reviewed (websites, magazine articles, Federal reports, etc.)
- Cross-sectional studies and narrative reviews.

Search Terms: Search Vocabulary

"Diabetes Mellitus"[Mesh] AND ("energy density" OR "calorie density" OR "caloric density").

Electronic Databases

Pubmed.

Total hits from all electronic database searches: 6

Total articles identified to review from electronic databases: 6

Articles Identified Via Handsearch or Other Means

Summary of Articles Identified to Review

Number of Primary Articles Identified: 2

Number of Review Articles Identified: 0

Total Number of Articles Identified: 2

Number of Articles Reviewed but Excluded: 4

List of Articles Included for Evidence Analysis

Lindström J, Peltonen M, Eriksson JG, Louheranta A, Fogelholm M, Uusitupa M, Tuomilehto J. High-fibre, low-fat diet predicts long-term weight loss and decreased type 2 diabetes risk: The Finnish Diabetes Prevention Study. *Diabetologia*. 2006 May; 49 (5): 912-920. Epub 2006 Mar 16. PMID: 16541277.

Wang J, Luben R, Khaw KT, Bingham S, Wareham NJ, Forouhi NG. Dietary energy density predicts the risk of incident type 2 diabetes: The European Prospective Investigation of Cancer (EPIC)-Norfolk Study. *Diabetes Care*. 2008 Nov; 31 (11): 2, 120-2, 125. Epub 2008 Aug 8. PMID: 18689693.

List of Excluded Articles with Reason

Citation	Reason for Exclusion
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<p>Devaraj S, Wang-Polagruto J, Polagruto J, Keen CL, Jialal I. High-fat, energy-dense, fast-food-style breakfast results in an increase in oxidative stress in metabolic syndrome. <i>Metabolism</i>. 2008 Jun; 57 (6): 867-870. PubMed PMID: 18502272.</p>	<p>Does not address question; did not examine the relationship between energy density and diabetes.</p>
<p>Murakami K, Sasaki S, Takahashi Y, Uenishi K; Japan Dietetic Students' Study for Nutrition and Biomarkers Group. Dietary energy density is associated with body mass index and waist circumference, but not with other metabolic risk factors, in free-living young Japanese women. <i>Nutrition</i>. 2007 Nov-Dec; 23 (11-12): 798-806. PMID: 17936194.</p>	<p>Does not address question; did not examine the relationship between energy density and diabetes.</p>
<p>Rolls BJ, Roe LS, Beach AM, Kris-Etherton PM. Provision of foods differing in energy density affects long-term weight loss. <i>Obes Res</i>. 2005 Jun;13 (6): 1, 052-1, 060. PMID: 15976148.</p>	<p>Does not address question; did not examine the relationship between energy density and diabetes.</p>
<p>Schröder H, Covas M, Elosua R, Mora J, Marrugat J. Diet quality and lifestyle associated with free selected low-energy density diets in a representative Spanish population. <i>Eur J Clin Nutr</i>. 2008 Oct; 62 (10): 1, 194-2, 000. Epub 2007 Jul 11. PMID: 17622256.</p>	<p>Does not address question; did not examine the relationship between energy density and diabetes.</p>